

## Claims

- [c1]                    1. A container system for flowable materials comprising:  
                          a front wall having an inner surface and an outer surface;  
                          a back wall having an inner surface and an outer surface;  
                          an opening in the front wall; and  
                          a patch attached to the back wall of the container, the patch opposite  
                          and in substantial registration with the opening.
- [c2]                    2. The container system of claim 1 wherein the patch is attached to  
                          the inner surface of the back wall.
- [c3]                    3. The container system of claim 1 wherein the patch is attached to  
                          the outer surface of the back wall.
- [c4]                    4. The container system of claim 1 further comprising a fitment  
                          assembly accommodated in the opening in the front wall, the fitment assembly  
                          having a flange attaching the fitment assembly to the front wall.
- [c5]                    5. The container system of claim 4 further comprising a heat sealable  
                          membrane attached to the flange.
- [c6]                    6. The container system of claim 5 wherein the heat sealable  
                          membrane is a monolayer structure or a multiple layer structure.
- [c7]                    7. The container system of claim 6 wherein the heat sealable  
                          membrane is a two layer structure.
- [c8]                    8. The container system of claim 7 wherein the heat sealable  
                          membrane includes a first heat sealable film layer and a second non-heat  
                          sealable film layer.
- [c9]                    9. The container system of claim 8 wherein the first heat sealable  
                          film layer is selected from the group of polyolefins, ethylene vinyl acetate  
                          copolymers, PVC, polyamides, and polyesters.
- [c10]                   10. The container system of claim 8 wherein the second non-heat  
                          sealable film layer is selected from the group of polyolefins, ethylene vinyl

acetate copolymers, PVC, polyamides, and polyesters.

[c11] 11. The container system of claim 1 wherein the patch is a monolayer structure or a multiple layer structure.

[c12] 12. The container system of claim 11 wherein the patch is a two layer structure.

[c13] 13. The container system of claim 12 wherein the patch includes a first layer of polyamide, and a second layer.

[c14] 14. The container system of claim 13 wherein the second layer is polyethylene.

[c15] 15. The container system of claim 11 wherein the patch is a three layer structure.

[c16] 16. The container system of claim 15 wherein the patch includes a first layer, a second layer, and a third metallized layer attached to the first layer opposite the second layer.

[c17] 17. The container system of claim 15 wherein the patch includes an inner layer, a first outer layer, and a second outer layer.

[c18] 18. The container system of claim 17 wherein the inner layer is metallized.

[c19] 19. The container system of claim 17 wherein the inner layer is a polyamide.

[c20] 20. The container system of claim 17 wherein the first outer layer is polyethylene.

[c21] 21. The container system of claim 17 wherein the second outer layer is polyethylene.

[c22] 22. The container system of claim 14 wherein the second layer is low density polyethylene.

- [c23] 23. The container system of claim 14 wherein the second layer is approximately 0.0005 inches thick.
- [c24] 24. The container system of claim 13 wherein the second layer is extrusion coated onto the first layer.
- [c25] 25. The container system of claim 12 wherein the patch includes a first layer of polyester, and a second layer.
- [c26] 26. The container system of claim 25 wherein the second layer is polyethylene.
- [c27] 27. The container system of claim 26 wherein the second layer is low density polyethylene.
- [c28] 28. The container system of claim 26 wherein the second layer is approximately 0.0005 inches thick.
- [c29] 29. The container system of claim 25 wherein the second layer is extrusion coated onto the first layer.
- [c30] 30. A multilayer film patch, the patch comprising:  
a first layer of polyamide; and  
a second layer of polyethylene.
- [c31] 31. The patch of claim 30 wherein the second layer is extrusion coated onto the first layer.
- [c32] 32. The patch of claim 30 wherein the second layer is approximately 0.0005 inches thick.
- [c33] 33. The patch of claim 30 wherein the second layer is a low density polyethylene.
- [c34] 34. The patch of claim 30 wherein the second layer of polyethylene has an outer surface, and further comprising adhesive on the outer surface of the second layer.
- [c35] 35. The patch of claim 34 wherein the adhesive includes at least one

bead of adhesive on the outer surface of the second layer.

[c36] 36. The patch of claim 30 further comprising a third layer attached to the first layer.

[c37] 37. The patch of claim 36 wherein the third layer is metallized.

[c38] 38. A multilayer film patch, the patch comprising:  
a first layer of polyester; and  
a second layer of polyethylene.

[c39] 39. The patch of claim 38 wherein the second layer of polyethylene has an outer surface, and further comprising adhesive on the outer surface of the second layer.

[c40] 40. The patch of claim 39 wherein the adhesive includes at least one bead of adhesive on the outer surface of the second layer.

[c41] 41. The patch of claim 38 wherein the second layer is extrusion coated onto the first layer.

[c42] 42. The patch of claim 38 wherein the second layer is approximately 0.0005 inches thick.

[c43] 43. The patch of claim 38 wherein the second layer is a low density polyethylene.

[c44] 44. A multilayer film patch, the film patch comprising:  
an inner metallized layer ;  
a first outer layer; and  
a second outer layer.

[c45] 45. The patch of claim 44 wherein the first outer layer is polyethylene.

[c46] 46. The patch of claim 44 wherein the second outer layer is polyethylene.

[c47] 47. A multilayer film patch, the film patch comprising:

an inner layer of polyamide;  
a first outer layer; and  
a second outer layer.

[c48] 48. The patch of claim 47 wherein the first outer layer is polyethylene.

[c49] 49. The patch of claim 47 wherein the second outer layer is polyethylene.

[c50] 50. A method of filling a flexible container comprising the steps of:  
providing a flexible container, the container having a front wall, the front wall having an inner surface and an outer surface, the front wall also having an opening, the container also having a back wall, the back wall having an inner surface and an outer surface;  
providing a fitment assembly accommodated in the opening in the front wall, the fitment assembly having a flange attaching the fitment assembly to the front wall, the flange also having a heat sealable membrane attached to the flange;  
attaching a patch to the outer surface of the container back wall;  
bringing at least part of the inner surface of the portion of the container back wall to which the patch is attached into contact with the heat sealable membrane; and  
applying heat to the patch while the inner surface of the back wall is in contact with the heat sealable membrane to seal the membrane to the flange.

[c51] 51. A method of filling a flexible container comprising the steps of:  
providing a flexible container, the container having a front wall, the front wall having an inner surface and an outer surface, the front wall also having an opening, the container also having a back wall, the back wall having an inner surface and an outer surface;  
providing a fitment assembly accommodated in the opening in the front wall, the fitment assembly having a flange attaching the fitment assembly to the front wall, the flange also having a heat sealable membrane attached to the flange;

attaching a patch to the inner surface of the container back wall;  
bringing at least part of the patch into contact with the heat sealable membrane; and

applying heat to the container back wall while the patch is in contact with the heat sealable membrane to seal the membrane to the flange.

[c52]

52. A method of filling a flexible container comprising the steps of:

providing a flexible container, the container having a front wall, the front wall having an inner surface and an outer surface, the front wall also having an opening, the container also having a back wall, the back wall having at least a first layer and a second layer;

providing a fitment assembly accommodated in the opening in the front wall, the fitment assembly having a flange attaching the fitment assembly to the front wall, the flange also having a heat sealable membrane attached to the flange;

positioning a patch between the first layer and second layer of the container back wall;

bringing at least part of the back wall into contact with the heat sealable membrane; and

applying heat to the container back wall while the first layer of the back wall is in contact with the heat sealable membrane to seal the membrane to the flange.

[c53]

53. A container for a flowable materials comprising:

a front wall having an inner surface and an outer surface;

a back wall having an inner surface and an outer surface;

an opening in the front wall; and

the back wall including a patch opposite the opening.

[c54]

54. The container of claim 53 wherein the patch is located between the inner and outer surface of the back wall.

[c55]

55. The container of claim 54 wherein the back wall includes a first layer and a second layer, and the patch is located between first layer and the second layer.